MULTIMEDIA UNIVERSITY

STUDENT IDENTIFICATION NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 3, 2022/2023

BKC3034 – BUSINESS SYSTEMS ANALYSIS AND DESIGN

(All Sections / Groups)

3 OCTOBER 2023
09.00 a.m – 11.00 a.m
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This Question paper consists of 4 pages excluding cover page with 4 Questions only.

2. Answer all **FOUR** questions. Mark distribution for each question is given.

3. Please write all your answers in the Answer Booklet provided.

QUESTION 1

a) Describe differences between:
- Computer application and information system
- System boundary and automation boundary.

(8 marks)

b) In general, there are two approaches to software construction and modelling – structured and object-oriented approach. Define *structured analysis* and *object-oriented analysis*. Name **ONE (1)** diagram that is associated with each approach.

(6 marks)

c) Prepare a **logical level-0 data flow diagram** based on the partial process below:

> Customers contact this company with a request for services. A contract is prepared and filed in the Contract file, and a copy of the contract is given to the customer. Using a Report of Hours Worked received from the Operations office, the hours worked are recorded into the Hours Worked file. Periodically, monthly statements are prepared using data from the Contract file and the Hours Worked file. The statements are sent to the customers and amounts due are recorded in the Accounts receivable master data. At the same time, a Contracts Not Billed report is prepared and sent to the Central sales office. The checks are mailed to the suppliers then.

(11 marks)

(Total: 25 marks)

Continued...

QUESTION 2

a) List and explain the steps involved in developing a detailed work schedule.

(9 marks)

b) Differentiate between *facilitating management* and *service provider solutions*. Provide **ONE (1)** example of each.

(6 marks)

c) Prepare an **activity diagram** based on the process for *Select Floor* as described below:

> The passenger pushes the destination floor button (internal button). The internal button sends the system the order to select the direction (up/down). The system changes the elevator status (from idle to busy). The system switches the floor button (internal button) light on. The system closes the elevator door. The system moves the elevator according to the destination floor direction (up/down). The elevator sends the system the order to control if the floor that the elevator is going to get through is the destination one. The system stops the elevator at the destination floor. The system opens the door at the destination floor. The passenger moves outside the elevator. The system switches the internal button off.

(10 marks)

(Total: 25 marks)

Continued...

QUESTION 3

a) One of the software deployment types under designing the environment for a system is the internal deployment. Explain **TWO (2)** types of systems that can be deployed under the internal deployment.

(12 marks)

b) Briefly describe **TWO (2)** guidelines for interface layout and formatting if you are designing for windows and forms.

(4 marks)

c) Draw a **use-case diagram** based on the narrative below:

Bus Reservation System is a system used for booking tickets online. Any passengers can book tickets for different busses. Passengers can book a ticket only if the tickets are available. Passengers searches for the availability of tickets then if the tickets are available, he/she books the tickets by initially filling their details in a form. Tickets can be booked in two ways by i-ticket or by e-ticket booking.

In the case of i-ticket booking, passengers can book the tickets online and the tickets are couriered to the passenger at his/her address. But in the case of e-ticket booking and cancelling tickets, the passengers must print the ticket in both cases. Payments for tickets are deducted from passengers' account.

For cancellation of tickets the passenger must go to the reservation office then fill the cancellation form and ask the clerk to cancel the tickets. The refund then is transferred to the passenger's account.

(9 marks)

(Total: 25 marks)

Continued...

QUESTION 4

a) Describe the purpose of conducting a *performance test* (also known as a stress test). Provide **TWO (2)** criteria used as indicators in this test.

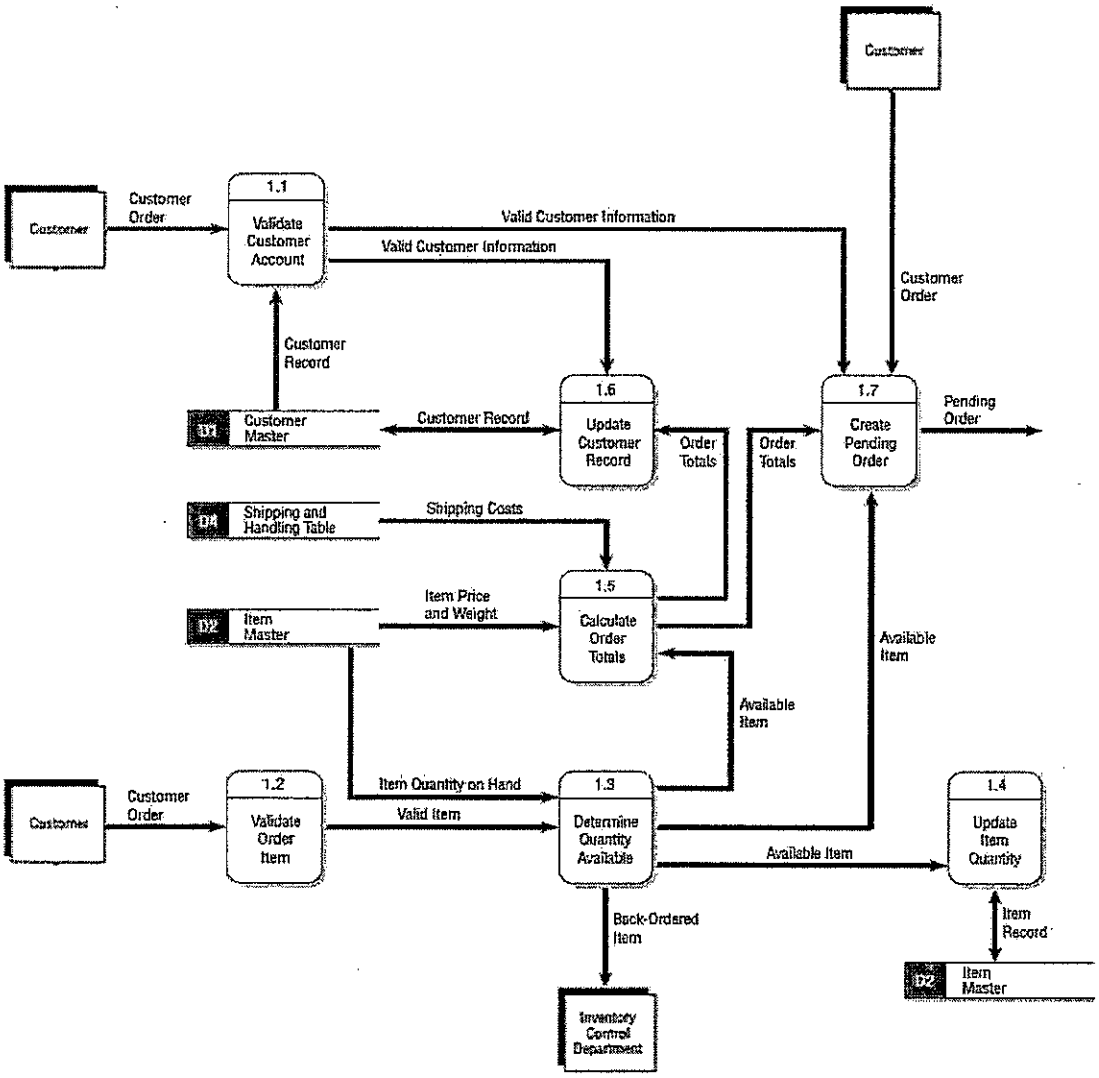
(8 marks)

b) Basic control mechanism for a Scrum project is the project backlog. Describe *project backlog*.

(6 marks)

c) The diagram below shows the expanded view of the data flow diagram for the module *Add Customer Order*. Create a **first-draft structure chart** using the ***transform analysis*** method.

(11 marks)



(Total: 25 marks)

End of Page